

WHAT IS CLAIMED IS:

1. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of vibration isolators for isolating said supporting member from outside vibrations by intervening between said supporting member and said base plate; a supporting member fixing mechanism for fixing said supporting member on said base plate by preventing said vibration isolators from isolating said supporting member from outside vibrations; a base plate driving mechanism for driving said base plate to pivotably move with respect to said housing; and a cam gear for transmitting a rotation torque to each of said supporting member fixing mechanism and said base plate driving mechanism.
- 15 2. An optical disk driving apparatus as set forth in claim 1, in which said optical disk driving unit further including: a plurality of trays for respectively accommodating said optical disks under the state that said central axis of each of said optical disks are in parallel relationship with one another; and in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.
- 25 3. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing including a front plate having a loading slot formed therein; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a shutter plate for shutting and opening said loading slot of said front plate; a shutter plate driving mechanism for driving said shutter plate to shut and open said loading slot of said front plate; a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of trays for respectively accommodating said optical disks; an optical disk guiding mechanism for guiding each of said optical disks to said turntable from said trays and vice versa; and a cam gear for transmitting a rotation torque to each of said shutter plate driving mechanism and said optical disk guiding mechanism.
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4. An optical disk driving apparatus as set forth in claim 3, in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.

5. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing including a front plate having a loading slot formed therein; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a shutter plate for shutting and opening said loading slot of said front plate; a shutter plate driving mechanism for driving said shutter plate to shut and open said loading slot of said front plate; a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of trays disposed in layers at specific intervals, and adapted to accommodate said optical disks respectively; an interval adjusting mechanism for adjusting each of said intervals of said trays; an optical disk guiding mechanism for guiding each of said optical disks to said turntable from said trays and vice versa; and a cam gear for transmitting a rotation torque to each of said shutter plate driving mechanism, said optical disk guiding mechanism, and said interval adjusting mechanism.

6. An optical disk driving apparatus as set forth in claim 5, in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.

7. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing including a front plate having a loading slot formed therein; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a shutter plate for shutting and opening said loading slot of said front plate; a shutter plate driving mechanism for driving said shutter plate to shut and open said loading slot of said front plate; a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of vibration isolators for isolating said supporting member from outside vibrations by intervening between said

- supporting member and said base plate; a supporting member fixing mechanism for fixing said supporting member on said base plate by preventing said vibration isolators from isolating said supporting member from outside vibrations; a base plate driving mechanism for driving said base plate to pivotably move with respect to said housing; a plurality of trays for respectively accommodating said optical disks; an interval adjusting mechanism for adjusting each of said intervals of said trays; an optical disk guiding mechanism for guiding each of said optical disks to said turntable from said rays and vice versa; a first cam gear for transmitting a rotation torque to each of said supporting member fixing mechanism and said base plate driving mechanism; a second cam gear for transmitting said rotation torque to each of said shutter plate driving mechanism and said optical disk guiding mechanism; and a transmission gear for transmitting said rotation torque to each of said first cam gear and said second cam gear.
- 15 8. An optical disk driving apparatus as set forth in claim 7, in which said turntable includes a plurality of cramp members for cramping said optical disk mounted on said turntable under the state that said central axis of said turntable is axially aligned with said central axis of said optical disk mounted on said turntable, said optical disk driving unit further includes a third cam gear for transmitting a rotation torque to said cramp member, and said transmission gear is operative to transmit said rotation torque to said third cam gear.
- 25 9. An optical disk driving apparatus as set forth in claim 8, in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.
- 30 10. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing including a front plate having a loading slot formed therein; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a shutter plate for shutting and opening said loading slot of said front plate; a shutter plate driving mechanism for driving said shutter plate to shut and open said loading slot of said front plate; a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of vibration isolators for isolating

- said supporting member from outside vibrations by intervening between said supporting member and said base plate; a supporting member fixing mechanism for fixing said supporting member on said base plate by preventing said vibration isolators from isolating said supporting member from outside vibrations; a base plate driving mechanism for driving said base plate to pivotably move with respect to said housing; a plurality of trays for respectively accommodating said optical disks; an optical disk guiding mechanism for guiding each of said optical disks to said turntable from said rays and vice versa; a first cam gear for transmitting a rotation torque to each of said supporting member fixing mechanism and said base plate driving mechanism; a second cam gear for transmitting said rotation torque to each of said shutter plate driving mechanism, said optical disk guiding mechanism, and said interval adjusting mechanism; and a transmission gear for transmitting said rotation torque to each of said first cam gear and said second cam gear.
- 15 11. An optical disk driving apparatus as set forth in claim 10, in which said turntable includes a plurality of cramp members for cramping said optical disk mounted on said turntable under the state that said central axis of said turntable is axially aligned with said central axis of said optical disk mounted on said turntable, said optical disk driving unit further includes a third cam gear for transmitting a rotation torque to said cramp member, and said transmission gear is operative to transmit said rotation torque to said third cam gear.
- 25 12. An optical disk driving apparatus as set forth in claim 11, in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.
- 30 13. An optical disk driving apparatus for selectively driving a plurality of optical disks each having a central axis, comprising: a housing including a front plate having a loading slot formed therein; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing; a plurality of trays for respectively accommodating said optical disks under the state that said central axis of each of said optical disks are in parallel relationship with one another; and a plurality of vibration

isolators each having a central axis, and adapted to isolate said supporting member from outside vibrations by intervening between said supporting member and said base plate, said vibration isolators being disposed on said base plate under the state that said central axis of each of said vibration isolators is in parallel relationship with
5 central axis of each of said optical disks accommodated in said trays.

14. An optical disk driving apparatus as set forth in claim 13, in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central
10 axis of said optical disk inserted toward said trays through said loading slot of said front plate.

15. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing; and an optical disk driving unit accommodated in said
15 housing, said optical disk driving unit including: a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing, and adapted to assume first and second operational positions; a base plate driving mechanism for pivotally driving said base plate to assume each of said first and second operational positions and, said base plate
20 driving mechanism including an urging mechanism for urging said base plate to said first operational position when said base plate assumes said first operation position, and urging said base plate to said second operational position when said base plate assumes said second operation position.

25 16. An optical disk driving apparatus as set forth in claim 15, in which said optical disk driving unit further including: a plurality of trays for respectively accommodating said optical disks under the state that said central axis of each of said optical disks are in parallel relationship with one another; and in which said base plate is pivotally moved with respect to said housing under the state that said central axis of
30 said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.

17. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing; and an optical disk driving unit accommodated in said
35 housing, said optical disk driving unit including: a turntable for selectively retaining said optical disks; a supporting member for rotatably supporting said turntable; a base

- plate pivotably retained by said housing; a plurality of vibration isolators for isolating said supporting member from outside vibrations by intervening between said supporting member and said base plate; and a supporting member fixing mechanism for fixing said supporting member on said base plate by preventing said vibration isolators from isolating said supporting member from outside vibrations, said supporting member fixing mechanism including a plurality of engaging members for engaging with each of said supporting member and said base plate at operation timings which are different from one another, and in operation directions which are different from one another.
- 10 18. An optical disk driving apparatus as set forth in claim 17, in which said optical disk driving unit further including: a plurality of trays for respectively accommodating said optical disks under the state that said central axis of each of said optical disks are in parallel relationship with one another; and in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.
- 15 19. An optical disk driving apparatus for selectively driving a plurality of optical disks, comprising: a housing; and an optical disk driving unit accommodated in said housing, said optical disk driving unit including: a plurality of trays for respectively accommodating said optical disks; a first urging mechanism for urging said trays to have said trays approach one another under the state that said trays are disposed in layers at specific intervals; and a second urging mechanism for urging said trays toward said housing.
- 20 20. An optical disk driving apparatus as set forth in claim 19, in which said optical disk driving unit further including: a turntable for selectively retaining said optical disks, said turntable having a central axis; a supporting member for rotatably supporting said turntable; a base plate pivotably retained by said housing, and a base plate driving mechanism for driving said base plate to pivotally move with respect to said housing, and in which said base plate is pivotally moved with respect to said housing under the state that said central axis of said turntable is substantially in perpendicular relationship with said central axis of said optical disk inserted toward said trays through said loading slot of said front plate.